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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/976,167	10/12/2001	Frederick Paul Benning	ROC920010111US1	1982

7590

03/24/2004

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IBM Corporation  
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EXAMINER
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AHMED, SHAMIM

ART UNIT	PAPER NUMBER
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1765

DATE MAILED: 03/24/2004

7

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Applicati n N .

09/976,167

Examiner

Shamim Ahmed

Applicant(s)

BENNING ET AL.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 26 January 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-18,35 and 36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18,35 and 36 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 October 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 2.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Specification*

1. The disclosure is objected to because of the following informalities: The disclosure includes blank spaces at page 5, line 18.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-3, 8, 11-12 and 35-36 are rejected under 35 U.S.C. 102(e) as being anticipated by Hartog et al (6,236,542).

As to claims 1, 11-12 and 35, Hartog et al disclose a cleaning polish etch composition comprises a carrying fluid such acid, neutral or base solution and metal etchant such as aluminum nitrate or cerium sulfate or any other etchant depending on the substrate for etching the substrate and/or the attached slurry particles (col.4, lines 19-28, col.5, lines 60-col.6, lines 17).

Hartog et al also disclose that the polishing composition includes organic or inorganic agents for stabilizing the colloidal particles in the slurry by providing steric

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hindrance to maintain dispersion of the colloidal particles, which reads on claimed surfactant (col.6, lines 45-53).

As to claims 2-3, Hartog et al teach that the substrate is a silicate based glass disk (col.4, lines 12-25).

As to claim 8, Hartog et al teach that the pH of the composition could be above 3.0, which reads on claimed pH 3.5 (col.5, line s40-43).

As to claim 36, Hartog et al teach that the colloidal particles have a size in the range of 0.001-1  $\mu\text{m}$  (1-1000nm) (col.6, lines 25-29).

The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein

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were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 4-6, 9 and 13 -18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hartog et al (6,236,542) in view of Labib et al (6,454,871).

Hartog et al discussed above in the paragraph 3 but fail to explicitly teach that the stabilizer (surfactant) could be anionic, cationic or nonionic in character.

However, Labib et al teach a cleaning composition includes surfactant for easily removing particles or residue with the help of steric effect and which surfactant can be anionic, cationic or nonionic (col.15, lines 3-22).

Therefore, it would have been obvious to one of ordinary skilled in the art at the time of claimed invention to combine Labib et al's teaching into Hartog et al's composition for easily removing particles or residue as taught by Labib et al.

As to claims 4-6, Hartog et al teach that the colloidal particles are silica based and pH of the composition could be about 1.0 (col.7, lines 8-13).

As to claims 9-10, Hartog et al teach that the colloidal particles have a size in the range of 0.001-1  $\mu\text{m}$  (1-1000nm) (col.6, lines 25-29).

7. Claims 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hartog et al (6,236,542) in view of Small et al (6,251,150).

Hartog et al discussed above in the paragraph 3 but fail to explicitly teach that the composition comprises colloidal alumina having a pH of about 3.5-10.5 (claim 8) or a pH of about 7-12 (claim 7).

However, Small et al (6,251,150) disclose a composition comprises colloidal particles of silica or alumina (aluminum oxide) having a pH of about 3.8-9.4 for maintaining the zeta potential of the slurry composition in order clean or remove the residue efficiently (col.10, lines 8-15, col.10, lines 48-51 and col.11, lines 4-7).

Therefore, it would have been obvious to one of ordinary skilled in the art at the time of claimed invention to combine Small et al's teaching into Hartog et al's composition for efficient removal of particles or residue as taught by Small et al.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Piltingsrud (6,402,851) disclose a cleaning polishing composition having acid, oxidizer, surfactants and metal etchant such as aluminum nitrate (col.5, lines 12-55).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shamim Ahmed whose telephone number is (571) 272-1457. The examiner can normally be reached on M-Thu (7:00-5:30) Every Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nadine G Norton can be reached on (571) 272-1465. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Shamim Ahmed  
Examiner  
Art Unit 1765

SA  
March 18, 2004